executing a CASE statement, or implementing a software state machine, or otherwise. After step 1629, operations go to step 1651.

In decision step 1625, the packet loss fraction value L is compared with a second threshold Threshold2, or Th2. If value L is less than Th2, then QoS has improved or is at a high level already. In such case, operations pass to a step 1631 to update NEWSTATE to increase the source rate. Step 1631 inputs a new estimated steady state overall transmission rate S. As in steps 1621 and 1623, NEWSTATE is suitably updated according to any software method selected by the skilled worker, such as by looking up in a table, or executing a CASE statement, or implementing a software state machine, or otherwise. As indicated in FIG. 1 and FIG. 10, the process need not be simply the reverse of the transitions available in step 1621, and so step 1631 is customized for its own updating purposes. Also, if the source rate can be increased no further, and the diversity can be decreased no further, then step 1631 simply makes NEWSTATE the same as the current state. One embodiment performs aggressive overall transmission rate increase if the ratio R of estimated steady state overall transmission rate S to current overall transmission rate exceeds a threshold Th3 (e.g. 3.0), and performs gradual overall transmission rate increase otherwise. For example, such embodiment uses TCP throughput estimate for new estimated steady state overall transmission rate S. The TCP throughput estimate is suitably that

Note among other advantageous features of the process of FIG. 31 that the return transition from state (s42,d42,e42) to state (s22,d22) is suitably made to be a larger transition in overall transmission rate than the subsequent return transition from (s22,d22) to (s12,d12) and thence to (s11,d11). In this way, a smoother servo homing behavior is achieved.

FIG. 31 is interpreted in light of the embodiments and transition criteria earlier discussed herein, and it should be apparent that numerous embodiments varying the arrangements illustrated in FIG. 31 are also contemplated based on mixing and matching various criteria from other embodiments.

FIG. 32 illustrates process, device and system embodiments applying a further concept of varying the number of frames per packet (frm/pkt) by transition from a state 3211 (1 frm/pkt) to a state 3221 (2 frm/pkt) when $A \geq F > Th1$. When $F > A > Th1$ in state 3211, a more aggressive adaptation transition to a state 3231 (3 frm/pkt) occurs.

Bracketed sets of packets illustrate the meaning of each state. State 3211 corresponds to transmission of packets in a series of packets each with a header H and a payload comprising one frame of compressed data, sent at a certain number of packets per second and a certain number of frames per second.

A second state 3221 involves transmission of packets in a series of packets each with a header H and a payload comprising two frames of